

AMENDMENTS TO THE CLAIMS

The following is a complete, marked up listing of revised claims with a status identifier in parentheses, underlined text indicating insertions, and strikethrough and/or double-bracketed text indicating deletions.

Listing of the Claims

1. (Currently Amended) ~~A recording medium storing~~ An optical disc having a data structure for managing reproduction of graphic data ~~by a reproducing apparatus, the optical disc comprising:~~

a data area storing a plurality of ~~source packets of a transport stream, each of the source packets including an extra header and a transport packet, the transport packets representing a graphic segments, the graphic segments including for a graphic images for overlay to be overlaid on main video data and navigation information controlling the graphic images, the transport packets representing of the graphic segments being multiplexed in sequential order within a data stream the main video data, a first transport packet of each graphic segment including attribute information of a corresponding graphic segment, wherein each of the transport packets of the graphic segments having~~ have a same packet identifier (PID);

~~wherein the graphic segment is used for controlling the graphic image, the graphic segment including the navigation information includes position information and time stamps of the graphic images, a time stamp of the graphic image and the graphic segments provide reproduction information for controlling display effects for of the graphic images, the display effects including being at least one of fade effect and wipe effect.~~

2. - 7. (Cancelled)

8. (Currently Amended) A method of reproducing a data structure for managing reproduction of graphic data from ~~an recording medium, optical disc, the method~~ comprising:

reading a data stream including a plurality of ~~source packets of a transport stream, each of the source packets including an extra header and a transport packet, the~~ transport packets representing a graphic segments, the graphic segments including for a graphic images for overlay to be overlaid on main video data and navigation information controlling the graphic images, the transport packets of ~~representing~~ the graphic segments being multiplexed in sequential order within the data stream ~~the main video data, a first transport packet of each graphic segment including attribute information of a corresponding graphic segment, the transport packets representing of the graphic segments having a same packet identifier, [[:]]~~

~~converting the transport stream into a data stream by depacketizing the source packets into the extra header and the transport packet;~~

~~demultiplexing the data stream into a main video stream and the graphic segment, the graphic segment being used for controlling the graphic image, the graphic segment~~ the navigation information including position information and time stamps of the graphic images, ~~a time stamp of the graphic image and the graphic segments providing reproduction information for controlling display effects of for the graphic images, the display effects being including~~ at least one of fade effect and wipe effect;

reproducing the main video ~~stream data~~ data and the graphic segments,

displaying the graphic images on the main video data according to the navigation information. ~~position information, the time stamp and the reproduction information such that the graphic image is displayed according to the at least one of fade effect and wipe effect.~~

9. (Currently Amended) An apparatus for reproducing a data structure for managing reproduction of graphic data from an optical disc recording medium, the apparatus comprising:

a reproducing device configured to read a data stream including a plurality of ~~source packets of a transport stream from the recording medium, each of the source packets including an extra header and a transport packet, the transport packets representing a graphic segments, the graphic segments including for a graphic images to be overlaid for overlay on main video data and navigation information controlling the graphic images,~~ the transport packets representing of the graphic segments being multiplexed in sequential order within the data stream ~~the main video data, a first transport packet of each graphic segment including attribute information of a corresponding graphic segment,~~ the transport packets representing of the graphic segments having a same packet identifier (PID),~~[[[:]]~~

~~a source depacketizer configured to convert the transport stream into a data stream by depacketizing the source packets into the extra header and the transport packet;~~

~~a demultiplexer configured to demultiplex the data stream into a main video stream and the graphic segment, the graphic segment being used for controlling the graphic image, the graphic segment the navigation information including position information and time stamps of the graphic images, a time stamp of the graphic image the graphic segments providing and reproduction information for controlling display effects for of the graphic images, the display effects including being at least one of fade effect and wipe effect; and~~

a controller configured to control the reproducing device to reproduce the main video ~~stream~~ data and the graphic segments, and display the graphic images on the

main video data according to the navigation information, ~~position information, the time stamp, and the reproduction information such that the graphic image is displayed according to the at least one of fade effect and wipe effect.~~

10. (Currently Amended) A method of recording a data structure for managing reproduction of graphic data on a ~~recording medium~~ an optical disc, the method comprising:

recording a plurality of ~~source packets of a transport stream on the recording medium, each of the source packets including an extra header and a transport packet,~~ the transport packets representing a graphic segments, the graph segments including for a graphic images to be overlaid on main video data and navigation information controlling the graphic images, the transport packets of the graphic segments being multiplexed in sequential order within a data stream ~~the main video data, the transport packets representing the graphic segment being multiplexed with the main video data, a first transport packet of each graphic segment including attribute information of a corresponding graphic segment, the transport packets representing of the graphic segments having a same packet identifier (PID),~~

~~wherein the graphic segment is used for controlling the graphic image, the graphic segment including navigation information includes position information and time stamps of the graphic images, a time stamp of the graphic image, and the graphic segments provide and reproduction information for controlling display effects for of the graphic images, the display effects being including at least one of fade effect and wipe effect.~~

11. (Currently Amended) An apparatus for recording a data structure for managing reproduction of graphic data on a ~~recording medium~~ an optical disc, the apparatus comprising:

a recording device configured to record data on the optical disc; and
a controller configured to control the recording device to record a plurality of
~~source packets of a transport stream on the recording medium, each of the source~~
~~packets including an extra header and a transport packet, the transport packets~~
representing a graphic segments for a, the graphic segments including graphic images to
be overlaid for overlay on main video data and navigation information controlling the
graphic images, the transport packets of representing the graphic segments being
multiplexed in sequential order within a data stream ~~the main video data, a first~~
transport packet of each graphic segment including attribute information of a
corresponding graphic segment, the transport packets representing of the graphic
segments having a same packet identifier (PID),~~[[:]]~~ ~~and~~

~~a controller configured to control the recording device,~~

wherein ~~the graphic segment is used for controlling the graphic image, the graphic~~
~~segment~~ the navigation information including position information and time stamps of
the graphic images, ~~a time stamp of the graphic image and the graphic segments provide~~
~~and reproduction information for controlling display effects for of the graphic images, the~~
display effects including being at least one of fade effect and wipe effect.

12. - 23. (Cancelled)

24. (Currently Amended) The ~~recording medium~~ optical disc of claim 1, wherein
the ~~graphic segment~~ navigation information includes ~~on~~ presentation time to display the
graphic images, and duration to display the graphic images.

25. (Currently Amended) The method of claim 8, wherein the ~~graphic segment~~
~~includes~~ navigation information includes ~~on~~ presentation time to display the graphic

images, and duration to display the graphic images.

26. (Currently Amended) The apparatus of claim 9, wherein ~~the controller is configured to control the reproducing device to reproduce the graphic segment~~ the navigation information includes ~~including information on~~ presentation time to display the graphic images, and duration to display the graphic images.

27. (Currently Amended) The method of claim 10, wherein ~~the graphic segment navigation information includes information on~~ presentation time to display the graphic images, and duration to display the graphic images.

28. (Currently Amended) The apparatus of claim 11, wherein ~~the controller is configured to control the recording device to record the graphic segment including information on~~ navigation information includes presentation time to display the graphic images, and duration to display the graphic images.

29. (Currently Amended) The ~~recording medium~~ optical disc of claim 1, ~~wherein the recording medium optical disc further stores a playlist including~~ the navigation information ~~for playback control of the main video stream.~~

30. (Currently Amended) The method of claim 8, further comprising:
reproducing a playlist from the ~~recording medium optical disc~~, the playlist including the navigation information ~~for playback control of the main video stream~~; and
reproducing the graphic segments using the playlist.

31. (Currently Amended) The apparatus of claim 9, wherein the controller is

~~configured to controls~~ the reproducing device to reproduce the graphic segments using a playlist, the playlist including the navigation information ~~for playback control of the main video stream.~~

32. (Currently Amended) The method of claim 10, further comprising:
recording a playlist including the navigation information ~~for playback control of the main video stream on the recording medium.~~

33. (Currently Amended) The apparatus of claim 11, wherein the controller is ~~configured to controls~~ the recording device to record a playlist including the navigation information ~~for playback control of the main video stream on the recording medium.~~

34. (Currently Amended) The ~~recording medium~~ optical disc of claim 29, wherein the playlist includes a graphic mark indexing the graphic images and specifying display duration of the graphic images.

35. (Currently Amended) The method of claim 30, wherein the playlist includes a graphic mark indexing the graphic images and specifying display duration of the graphic images.

36. (Currently Amended) The apparatus of claim 31, wherein the playlist includes a graphic mark indexing the graphic images and specifying display duration of the graphic images.

37. (Currently Amended) The method of claim 32, wherein the playlist includes a graphic mark indexing the graphic images_u and specifying display duration of the graphic images_u.

38. (Currently Amended) The apparatus of claim 33, wherein the playlist includes a graphic mark indexing the graphic images_u and specifying display duration of the graphic images_u.

39. (Currently Amended) The optical disc-recording medium of claim 29, wherein the playlist includes display information for specifying display start and end times of the graphic images_u and display position and window size of the graphic images_u on the main video data.

40. (Currently Amended) The method of claim 30, wherein the playlist includes display information for specifying display start and end times of the graphic images_u and display position and window size of the graphic images_u on the main video data.

41. (Currently Amended) The apparatus of claim 31, wherein the playlist includes display information for specifying display start and end times of the graphic images_u and display position and window size of the graphic images_u on the main video data.

42. (Currently Amended) The method of claim 32, wherein the playlist includes display information for specifying display start and end times of the graphic images_u, and display position and window size of the graphic images_u on the main video data.

43. (Currently Amended) The apparatus of claim 33, wherein the playlist includes

display information for specifying display start and end times of the graphic images and display position and window size of the graphic images on the main video data.

44-48. (Cancelled)